



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/796,400

03/09/2004

Hisao M. Chang

1033-LB1031

9036

60533 7590 07/13/2007
TOLER SCHAFFER, LLP
8500 BLUFFSTONE COVE
SUITE A201
AUSTIN, TX 78759

EXAMINER

PATEL, HEMANT SHANTILAL

ART UNIT

PAPER NUMBER

2614

MAIL DATE

DELIVERY MODE

07/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/796,400

Applicant(s)

CHANG, HISAO M.

Examiner

Hemant Patel

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-13 and 31-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-13 and 31-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 1, 2007 has been entered. Claims 1-9, 11-13, 31-37 are pending in this application.

Response to Amendment

2. Applicant's arguments with respect to claims 1-9, 11-13, 31-37 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 32, 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett (US Patent Application Publication No. 2004/0141596 A1), and further in view of Brown (US Patent No. 6,587,822 B2).

Regarding claims 1, 32, Crockett teaches of a network based voice activated auto-attendant system comprising:

a voice activated auto-attendant service provider network including an enterprise voice directory, a database of voice directory grammars, and a media gateway having a telephony interface and a data interface (Fig. 1, item 40 VXML platform with VXML interpreter 42, Speech objects 46 and Document/application server 47 with subscriber specific voice directory of menus, forms, instructions; Paragraph 0099, communication between calling party and VXML platform enabled and controlled by VXML interpreter 42);

a data connector (HTTP) to receive data from a remote enterprise information system (Fig. 1, item 35) via a public network (Fig. 1, item 60) and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars (Paragraphs 0123-0124, 0150, HTTP to receive HTML and XML data documents from remote enterprise information system Fig. 1, item 35 via public network Fig. 1, item 60 and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars i. e. HTML documents reformatted to include voice markups to be used by text-to-speech to provide menus, forms and prompts).

Crockett teaches of converting received data in enterprise data format (HTML) to internal data format suitable for use by VXML platform, but Crockett does not teach of converting received enterprise data format to common data format, and using a data processor to construct grammars from the common data format.

However, in the same field of endeavor, Brown teaches of voice-operated system wherein data connectors (Fig. 2, item 110 with item 112; col. 3, ll. 39-52; connectors for

HTML, PML) receive enterprise data format from an enterprise data repositories (col. 3, ll. 33-35, 43-52) and convert it to internal format (col. 3, ll. 39-42; output of parser) suitable to construct voice directory (col. 3, ll. 60-64), and a grammar generator (data processor; Fig. 2, item 120) coupled to the voice directory (col. 6, ll. 8-18) and coupled to the data connector (Fig. 2, items 110 with item 112) constructs the grammar (voice directory) from the common data format (output of parser) (col. 3, ll. 60-64; col. 5, ll. 60-col. 6, ll. 18; col. 6, ll. 30-40; construct grammar from the output of parser) (col. 11, ll. 59-col.13, ll. 36)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Crockett to use data connectors to receive data in enterprise format and convert it to internal common format for use by the grammar generator to construct grammar (voice directory) as taught by Brown so that "a user can program applications which utilize the IVR platform 102 by simply writing HTML, PML or other types of web pages, while obtaining the IVR platform service from an ISP which owns that platform, the small business or individual user does not need to make any large investment in equipment" (Brown, col. 13, ll. 46-51) by using an industry standard grammar generator (Brown, col. 11, ll. 60-col. 12, ll. 6).

Regarding claim 35, Crockett teaches of a system comprising:

a gateway responsive to a public telephone network (Fig. 1, item 42; Paragraph 0099, communication between calling party and VXML platform enabled and controlled by VXML interpreter 42);

a data connector responsive to a public network to receive data from remote enterprise information systems and to dynamically construct grammars from the received data (Paragraphs 0123-0124, 0150, HTTP to receive HTML and XML data documents from remote enterprise information system Fig. 1, item 35 via public network Fig. 1, item 60 and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars i. e. HTML documents reformatted to include voice markups to be used by text-to-speech to provide menus, forms and prompts); and

an enterprise voice service platform to store the dynamically constructed grammars (Fig. 1, items 40, 46, 47) from a first remote enterprise information system in a first directory (directory number of a user of web server 35) and from a second remote enterprise system in a second directory (directory number of another user of another web server 35, the system provides numerous web servers Paragraph 0106), the enterprise voice service platform to provide a first voice service to a first set of incoming calls based on the first directory and a second voice service to a second set of incoming calls based on the second directory (Paragraph 0138, the voice services provided by the system are individually based on calling party and called directory number).

Crockett teaches of converting received data in enterprise data format (HTML) to internal data format suitable for use by VXML platform, but Crockett does not teach of converting received enterprise data format to common data format, and using a data processor to construct grammars from the common data format.

However, in the same field of endeavor, Brown teaches of voice-operated system wherein data connectors (Fig. 2, item 110 with item 112; col. 3, ll. 39-52; connectors for HTML, PML) receive enterprise data format from an enterprise data repositories (col. 3, ll. 33-35, 43-52) and convert it to internal format (col. 3, ll. 39-42; output of parser) suitable to construct voice directory (col. 3, ll. 60-64), and a grammar generator (data processor; Fig. 2, item 120) coupled to the voice directory (col. 6, ll. 8-18) and coupled to the data connector (Fig. 2, items 110 with item 112) constructs the grammar (voice directory) from the common data format (output of parser) (col. 3, ll. 60-64; col. 5, ll. 60-64; col. 6, ll. 18; col. 6, ll. 30-40; construct grammar from the output of parser) (col. 11, ll. 59-col.13, ll. 36)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Crockett to use data connectors to receive data in enterprise format and convert it to internal common format for use by the grammar generator to construct grammar (voice directory) as taught by Brown so that "a user can program applications which utilize the IVR platform 102 by simply writing HTML, PML or other types of web pages, while obtaining the IVR platform service from an ISP which owns that platform, the small business or individual user does not need to make any large investment in equipment" (Brown, col. 13, ll. 46-51) by using an industry standard grammar generator (Brown, col. 11, ll. 60-col. 12, ll. 6).

Regarding claim 36, Crockett teaches of a system wherein the data connector is adapted to receive updated data from the remote enterprise information systems and to dynamically update the dynamically constructed grammars based on the received

updated data (Paragraphs 0170-0172, subscriber creates or modifies a script which the web server 35 serves as HTML documents to VXML platform, these scripts are reformatted into XML including voice markups by an application server of VXML platform and once approved by the subscriber are stored for use during call processing).

Regarding claim 37, Crockett teaches of a system comprising:

a data connector (HTTP) responsive to one or more remote enterprise information systems (Paragraphs 0106, numerous web servers 35) to receive data via a public network (Fig. 1, item 60) and to process the received data, the data connector to construct grammars to produce an enterprise voice directory for each of the one or more remote enterprise information systems (Paragraphs 0123-0124, 0150, to receive HTML and XML data documents from remote enterprise information system Fig. 1, item 35 via public network Fig. 1, item 60 and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars i. e. HTML documents reformatted to include voice markups to be used by text-to-speech to provide menus, forms and prompts); and

a voice activated auto-attendant (Fig. 1, item 40 VXML platform with VXML interpreter 42) to host the enterprise voice directory of each of the one or more remote enterprise information systems (Fig. 1, items 46, 47 storing each individual subscriber specific speech, menu, prompt etc. information for subscribers from different web servers 35 used by different enterprises), the voice activated auto-attendant to receive an incoming telephone call directed to a called number and to process the telephone

call using the enterprise voice directory associated with the called number (Paragraph 0138, the voice services provided by the system are individually based on calling party and called directory number).

Crockett teaches of converting received data in enterprise data format (HTML) to internal data format suitable for use by VXML platform, but Crockett does not teach of converting received enterprise data format to common data format, and using a data processor to construct grammars from the common data format.

However, in the same field of endeavor, Brown teaches of voice-operated system wherein data connectors (Fig. 2, item 110 with item 112; col. 3, ll. 39-52; connectors for HTML, PML) receive enterprise data format from an enterprise data repositories (col. 3, ll. 33-35, 43-52) and convert it to internal format (col. 3, ll. 39-42; output of parser) suitable to construct voice directory (col. 3, ll. 60-64), and a grammar generator (data processor; Fig. 2, item 120) coupled to the voice directory (col. 6, ll. 8-18) and coupled to the data connector (Fig. 2, items 110 with item 112) constructs the grammar (voice directory) from the common data format (output of parser) (col. 3, ll. 60-64; col. 5, ll. 60-col. 6, ll. 18; col. 6, ll. 30-40; construct grammar from the output of parser) (col. 11, ll. 59-col.13, ll. 36)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Crockett to use data connectors to receive data in enterprise format and convert it to internal common format for use by the grammar generator to construct grammar (voice directory) as taught by Brown so that "a user can program applications which utilize the IVR platform 102 by simply writing HTML, PML or

Art Unit: 2614

other types of web pages, while obtaining the IVR platform service from an ISP which owns that platform, the small business or individual user does not need to make any large investment in equipment" (Brown, col. 13, ll. 46-51) by using an industry standard grammar generator (Brown, col. 11, ll. 60-col. 12, ll. 6).

5. Claims 1, 4-9, 32, 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett (US Patent Application Publication No. 2004/0141596 A1), and further in view of Jones (US Patent No. 6,804,330 B1).

Regarding claims 1, 32, Crockett teaches of a network based voice activated auto-attendant system comprising:

a voice activated auto-attendant service provider network including an enterprise voice directory, a database of voice directory grammars, and a media gateway having a telephony interface and a data interface (Fig. 1, item 40 VXML platform with VXML interpreter 42, Speech objects 46 and Document/application server 47 with subscriber specific voice directory of menus, forms, instructions; Paragraph 0099, communication between calling party and VXML platform enabled and controlled by VXML interpreter 42);

a data connector (HTTP) to receive data from a remote enterprise information system (Fig. 1, item 35) via a public network (Fig. 1, item 60) and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars (Paragraphs 0123-0124, 0150, HTTP to receive HTML and XML data documents from remote enterprise information system Fig. 1, item

35 via public network Fig. 1, item 60 and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars i. e. HTML documents reformatted to include voice markups to be used by text-to-speech to provide menus, forms and prompts).

Crockett teaches of converting received data in enterprise data format (HTML) to internal data format suitable for use by VXML platform, but Crockett does not teach of converting received enterprise data format to common data format, and using a data processor to construct grammars from the common data format.

However, in the same field of endeavor, Jones teaches of voice-operated system wherein data connectors (Fig. 9, item 151 with item 153; col. 17, ll. 31-35) receive enterprise data format from an enterprise data repositories (col. 6, ll. 5-25; col. 17, ll. 22-24) and convert it to internal format suitable to construct voice directory (col. 17, ll. 36-46; converting into strings acceptable to compilation server used by grammar generator), and a grammar generator (data processor; Fig. 9, item 155) coupled to the voice directory (Fig. 10, item 20) and coupled to the data connector (Fig. 9, items 151 with item 153) constructs the grammar (voice directory) from the common data format (col. 17, ll. 47-col. 18, ll. 7; construct grammar from the output of homophone generator) (col. 18, ll. 8-col.19, ll. 22)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Crockett to use data connectors to receive data in enterprise format and convert it to internal common format for use by the grammar generator to construct grammar (voice directory) as taught by Jones in order to "enable

the mobile professional to access data from virtually any location, such as via a wireless phone" (Jones, col. 1, ll. 50-52), and "enable users to access a wide variety of different data types from a telephone, whereby the user could perform ad hoc queries and access user- or company-specific information that has been stored in a database by the user or others known to the user rather than an institution that maintains the database" (Jones, col. 1, ll. 64-col. 2, ll. 2), and enable "a user of a phone 10 to access data stored in a CRM database 12 from a remote location using verbal commands" (Jones, col. 5, ll. 13-15) so that "Users may also interactively initiate a phone call to selected contacts, accounts, and/or employees through the system while participating in a user session" (Jones, col. 2, ll. 48-51).

Regarding claim 4, Jones teaches of voice activated auto-attendant service that provides functions of a session manager responsive to the enterprise voice directory (Fig. 22, steps 446-456) and a voice search engine responsive to the directory of voice grammars (Fig. 22, steps 360, 462-466, responding to dialing by workgroup name, geographic name similar to selecting by customer service group as in the instant application Paragraph 0025) (col. 26, ll. 24-44).

Regarding claim 5, Jones teaches of voice activated auto-attendant service that also integrates the function of the voice browser (Figs. 1-7, 18, 22 and their corresponding description in the reference art).

Regarding claim 6, Crockett teaches of using voice XML (VXML) server through voiceXML platform that includes a browser i.e. voiceXML browser (Paragraph 0123).

Regarding claims 7, 34, Jones teaches of dialog engine providing dynamic information as requested by the user (Figs. 18, 22-24 and their corresponding description in the reference art). Crockett teaches of dynamically generating grammars.

Regarding claim 8, Jones teaches of a call agent functions to enable outgoing call to a retrieved contact (Figs. 22-24 and their corresponding description in the reference art).

Regarding claim 9, Jones teaches of connecting to a landline phone network (Fig. 3, item 66).

Regarding claim 35, Crockett teaches of a system comprising:
a gateway responsive to a public telephone network (Fig. 1, item 42; Paragraph 0099, communication between calling party and VXML platform enabled and controlled by VXML interpreter 42);

a data connector responsive to a public network to receive data from remote enterprise information systems and to dynamically construct grammars from the received data (Paragraphs 0123-0124, 0150, HTTP to receive HTML and XML data documents from remote enterprise information system Fig. 1, item 35 via public network Fig. 1, item 60 and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars i. e. HTML documents reformatted to include voice markups to be used by text-to-speech to provide menus, forms and prompts); and

an enterprise voice service platform to store the dynamically constructed grammars (Fig. 1, items 40, 46, 47) from a first remote enterprise information system in

a first directory (directory number of a user of web server 35) and from a second remote enterprise system in a second directory (directory number of another user of another web server 35, the system provides numerous web servers Paragraph 0106), the enterprise voice service platform to provide a first voice service to a first set of incoming calls based on the first directory and a second voice service to a second set of incoming calls based on the second directory (Paragraph 0138, the voice services provided by the system are individually based on calling party and called directory number).

Crockett teaches of converting received data in enterprise data format (HTML) to internal data format suitable for use by VXML platform, but Crockett does not teach of converting received enterprise data format to common data format, and using a data processor to construct grammars from the common data format.

However, in the same field of endeavor, Jones teaches of voice-operated system wherein data connectors (Fig. 9, item 151 with item 153; col. 17, ll. 31-35) receive enterprise data format from an enterprise data repositories (col. 6, ll. 5-25; col. 17, ll. 22-24) and convert it to internal format suitable to construct voice directory (col. 17, ll. 36-46; converting into strings acceptable to compilation server used by grammar generator), and a grammar generator (data processor; Fig. 9, item 155) coupled to the voice directory (Fig. 10, item 20) and coupled to the data connector (Fig. 9, items 151 with item 153) constructs the grammar (voice directory) from the common data format (col. 17, ll. 47-col. 18, ll. 7; construct grammar from the output of homophone generator) (col. 18, ll. 8-col.19, ll. 22)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Crockett to use data connectors to receive data in enterprise format and convert it to internal common format for use by the grammar generator to construct grammar (voice directory) as taught by Jones in order to "enable the mobile professional to access data from virtually any location, such as via a wireless phone" (Jones, col. 1, ll. 50-52), and "enable users to access a wide variety of different data types from a telephone, whereby the user could perform ad hoc queries and access user- or company-specific information that has been stored in a database by the user or others known to the user rather than an institution that maintains the database" (Jones, col. 1, ll. 64-col. 2, ll. 2), and enable "a user of a phone 10 to access data stored in a CRM database 12 from a remote location using verbal commands" (Jones, col. 5, ll. 13-15) so that "Users may also interactively initiate a phone call to selected contacts, accounts, and/or employees through the system while participating in a user session" (Jones, col. 2, ll. 48-51).

Regarding claim 36, Crockett teaches of a system wherein the data connector is adapted to receive updated data from the remote enterprise information systems and to dynamically update the dynamically constructed grammars based on the received updated data (Paragraphs 0170-0172, subscriber creates or modifies a script which the web server 35 serves as HTML documents to VXML platform, these scripts are reformatted into XML including voice markups by an application server of VXML platform and once approved by the subscriber are stored for use during call processing).

Regarding claim 37, Crockett teaches of a system comprising:

a data connector (HTTP) responsive to one or more remote enterprise information systems (Paragraphs 0106, numerous web servers 35) to receive data via a public network (Fig. 1, item 60) and to process the received data, the data connector to construct grammars to produce an enterprise voice directory for each of the one or more remote enterprise information systems (Paragraphs 0123-0124, 0150, to receive HTML and XML data documents from remote enterprise information system Fig. 1, item 35 via public network Fig. 1, item 60 and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars i. e. HTML documents reformatted to include voice markups to be used by text-to-speech to provide menus, forms and prompts); and

a voice activated auto-attendant (Fig. 1, item 40 VXML platform with VXML interpreter 42) to host the enterprise voice directory of each of the one or more remote enterprise information systems (Fig. 1, items 46, 47 storing each individual subscriber specific speech, menu, prompt etc. information for subscribers from different web servers 35 used by different enterprises), the voice activated auto-attendant to receive an incoming telephone call directed to a called number and to process the telephone call using the enterprise voice directory associated with the called number (Paragraph 0138, the voice services provided by the system are individually based on calling party and called directory number).

Crockett teaches of converting received data in enterprise data format (HTML) to internal data format suitable for use by VXML platform, but Crockett does not teach of

converting received enterprise data format to common data format, and using a data processor to construct grammars from the common data format.

However, in the same field of endeavor, Jones teaches of voice-operated system wherein data connectors (Fig. 9, item 151 with item 153; col. 17, ll. 31-35) receive enterprise data format from an enterprise data repositories (col. 6, ll. 5-25; col. 17, ll. 22-24) and convert it to internal format suitable to construct voice directory (col. 17, ll. 36-46; converting into strings acceptable to compilation server used by grammar generator), and a grammar generator (data processor; Fig. 9, item 155) coupled to the voice directory (Fig. 10, item 20) and coupled to the data connector (Fig. 9, items 151 with item 153) constructs the grammar (voice directory) from the common data format (col. 17, ll. 47-col. 18, ll. 7; construct grammar from the output of homophone generator) (col. 18, ll. 8-col.19, ll. 22)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Crockett to use data connectors to receive data in enterprise format and convert it to internal common format for use by the grammar generator to construct grammar (voice directory) as taught by Jones in order to "enable the mobile professional to access data from virtually any location, such as via a wireless phone" (Jones, col. 1, ll. 50-52), and "enable users to access a wide variety of different data types from a telephone, whereby the user could perform ad hoc queries and access user- or company-specific information that has been stored in a database by the user or others known to the user rather than an institution that maintains the database" (Jones, col. 1, ll. 64-col. 2, ll. 2), and enable "a user of a phone 10 to access data stored

in a CRM database 12 from a remote location using verbal commands" (Jones, col. 5, ll. 13-15) so that "Users may also interactively initiate a phone call to selected contacts, accounts, and/or employees through the system while participating in a user session" (Jones, col. 2, ll. 48-51).

6. Claims 1-9, 11-13, 32, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keung (US Patent No. 6,956,848 B1), and further in view of Crockett (US Patent Application Publication No. 2004/0141596 A1), and further in view of Jones (US Patent No. 6,804,330 B1).

Regarding claims 1, 32, Keung teaches of a system of a network based auto-attendant system with a provider network using enterprise voice directory (col. 15, ll. 1, hear a company directory; col. 16, ll. 12-13, hearing a directory of individuals or workgroups) inherently suggesting the use of directory grammar (col. 16, 64-67, recognizing the spoken name to determine any person or department by the spoken name; col. 18, ll. 13-14, recognize spoken words to determine the party desired and then call that party); and a media gateway (Fig. 1, item 2) integrated in to the system having a telephony interface connecting to phone lines and telephone trunks and a data interface connecting to Ethernet network.

Keung does not specifically teach of receiving data from remote system and process it for use by voice directory or grammar after converting the received data from enterprise format to common format.

However, in the same field of endeavor, Crockett teaches of data connector (HTTP) receiving and processing the received data (HTML and XML documents) from remote enterprise information system (Fig. 1, item 35) via public network (Fig. 1, item 60) and to process the received data to construct grammars for use by the enterprise voice directory and the database of voice directory grammars (HTML documents reformatted to include voice markups to be used by text-to-speech to provide audio data i.e. menus, forms and prompts) (Paragraphs 0123-0124, 0150).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to modify Keung with data connector to receive and process data to store in a database for use by voice platform as taught by Crockett in order to enable the subscriber to create, modify, delete customized call handling scripts through a web client supported by web server using internet at any time and any where (Crockett Paragraph 0172).

Crockett further teaches of converting received data in enterprise data format (HTML) to internal data format suitable for use by VXML platform, but Keung modified by Crockett does not teach of converting received enterprise data format to common data format, and using a data processor to construct grammars from the common data format.

However, in the same field of endeavor, Jones teaches of voice-operated system wherein data connectors (Fig. 9, item 151 with item 153; col. 17, ll. 31-35) receive enterprise data format from an enterprise data repositories (col. 6, ll. 5-25; col. 17, ll. 22-24) and convert it to internal format suitable to construct voice directory (col. 17, ll. 36-

46; converting into strings acceptable to compilation server used by grammar generator), and a grammar generator (data processor; Fig. 9, item 155) coupled to the voice directory (Fig. 10, item 20) and coupled to the data connector (Fig. 9, items 151 with item 153) constructs the grammar (voice directory) from the common data format (col. 17, ll. 47-col. 18, ll. 7; construct grammar from the output of homophone generator) (col. 18, ll. 8-col.19, ll. 22)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Keung modified by Crockett to use data connectors to receive data in enterprise format and convert it to internal common format for use by the grammar generator to construct grammar (voice directory) as taught by Jones in order to "enable the mobile professional to access data from virtually any location, such as via a wireless phone" (Jones, col. 1, ll. 50-52), and "enable users to access a wide variety of different data types from a telephone, whereby the user could perform ad hoc queries and access user- or company-specific information that has been stored in a database by the user or others known to the user rather than an institution that maintains the database" (Jones, col. 1, ll. 64-col. 2, ll. 2), and enable "a user of a phone 10 to access data stored in a CRM database 12 from a remote location using verbal commands" (Jones, col. 5, ll. 13-15) so that "Users may also interactively initiate a phone call to selected contacts, accounts, and/or employees through the system while participating in a user session" (Jones, col. 2, ll. 48-51).

Regarding claim 2, Keung teaches of media gateway handling calls from IP telephone using IP packets across computer network (col. 18, ll. 63-67, col. 19, ll. 11-24).

Regarding claim 3, Keung does not specifically teach of firewall.

However, in the same field of endeavor, Crockett teaches of connection using firewall (Fig. 1, item 61) between compatible protocol data connector at the external database (Fig. 1, item 28, Paragraph 0089) and the remote web server (Fig. 1, item 35, remote enterprise information system).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to modify Keung with a connection using firewall between data connector and the remote web server as taught by Crockett in order to provide data security to users over open public network like Internet as is well known in the art.

Regarding claim 4, Keung teaches of voice activated auto-attendant service that integrates functions of the session manager (col. 13, ll. 59-col. 14, ll. 13, multiple instances of auto-attendant sessions spawned), which responds to the enterprise voice directory (col. 17, ll. 48-51, providing telephone directory to the caller) and the voice search engine responsive to the directory of grammars (col. 17, ll. 8-9, responding to dialing by workgroup name, geographic name similar to selecting by customer service group as in the instant application Paragraph 0025).

Regarding claim 5, Keung teaches of voice activated auto-attendant service that also integrates the function of the voice browser (col. 16, ll. 6-col. 7, ll. 23, auto-

attendant providing voice menus and responding to spoken responses, that are converted to ASCII characters, with actions).

Regarding claim 6, Keung does not teach of voiceXML browser.

However, in the same field of endeavor, Crockett teaches of using voice XML (VXML) server through voiceXML platform that includes a browser i.e. voiceXML browser (Paragraph 0123).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to modify Keung with the use of voiceXML platform with a browser as taught by Crockett in order to "enable efficient communication between a calling party and the PSTN" and maintaining "greater flexibility to seek and retrieve call related data from the Internet, while maintaining control of the call within the PSTN" (Crockett, Paragraph 0072).

Regarding claims 7, 34, Keung teaches of providing dynamic list of personal directory, workgroup directory or a geographical directory to the caller (col. 17, ll. 61-65, this is similar to dynamic voice grammar providing names of employees in the customer service group in the instant application Paragraph 0025). Crockett teaches of dynamically generating grammars.

Regarding claim 8, Keung teaches of a processor that provides call agent functions and also incorporates media gateway with connections to telephones and computer network (Fig. 2, 3, item 90).

Regarding claim 9, Keung teaches of a media gateway (Fig. 1, item 2) coupled to a telephone trunk line (PSTN).

Regarding claim 11, Keung does not teach of data connector.

However, in the same field of endeavor, Crockett teaches of a data connector (Paragraph 0160, well known socket connection over TCP/IP using HTTP) coupled to the remote enterprise information system (Fig. 1, item 35, web server) that is remotely located with respect to the data connector (data connector of database Fig. 1, item 28).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to modify Keung with the data processor at the remote web server as taught by Crockett in order to provide standard ubiquitous mechanism for client data transfer.

Also, Jones teaches of data connectors (Fig. 9, item 151 with item 153; col. 17, ll. 31-35).

Regarding claim 12, Keung does not teach of data connector.

However, in the same field of endeavor, Crockett teaches of a second data connector (Paragraph 0160, well known socket connection over TCP/IP using HTTP) coupled to the remote enterprise information system (Fig. 1, item 28, subscriber database) via virtual private network (Fig. 1, item 50, organizations internal net i.e. intranet behind firewall separated from public network i.e. Intranet).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to modify Keung with the use of virtual private network as taught by Crockett in order to provide data security using secure private network.

Regarding claim 13, Keung does not teach of secured website.

However, in the same field of endeavor, Crockett teaches of a secured website (Fig. 1, item 35, web server) coupled to the data connector (Fig. 1, item 28, standard protocol interface at subscriber database) via firewall (Fig. 1, item 61), this website (web server) also coupled to the work wide web (Fig. 1, item 60, Internet).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to modify Keung with the secured web site connected to data connector and world wide web as taught by Crockett in order to provide secure data transfer and data warehousing as is well known in the art.

7. Claims 31, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keung modified by Crockett further modified by Jones as applied to claim 1 above, and further in view of Roberts (US Patent No. 6,999,930 B1).

Regarding claim 31, Crockett teaches of numerous other web servers that VXML platform can connect through firewall and Internet suggesting the use of multiple data connectors. Also, Jones teaches of database interfaces based on enterprise data format to access data from remote distributed databases (col. 6, ll. 17-25; col. 17, ll. 31-34).

Keung modified by Crockett further modified by Jones does not specifically teach of selecting second data connector based on the type of data in an enterprise information system.

However, in the same field of endeavor, Roberts teaches of a second data connector coupled to the remote enterprise information system (Fig. 1, data connectors

to access backend systems of various enterprise networks 118....120) wherein this second data connector is selected (col. 11, ll. 40-45, backend system requesting data in the structured query language SQL format) based on type of data source included in the remote enterprise information system (from SQL compatible database source), wherein the second data connector convert data to a format compatible with the voice activated service (XML data in backend system and it is compatible VoiceXML used by voice activated service).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to modify Keung modified by Crockett further modified by Jones to use second data connector compatible to other dispersed enterprise systems as taught by Roberts in order to be able to retrieve integrated data on a per user basis using SQL query which can be customized per user as is well known in the art.

Regarding claim 33, Keung modified by Crockett further modified by Jones does not teach of records with record type, directory ID, name and location information fields.

However, in the same field of endeavor, Roberts teaches of record with record type (col. 7, ll. 59-61, individual DML file based on user to process voice interactions), entries identified with customer name (col. 9, ll. 1-4), location (col. 8, ll. 10-12, searching database entry with specific location information) and DML file (i.e. record) lists backend systems (col. 8, ll. 22-24; i.e. providing directory ID).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to modify Keung modified by Crockett further modified by Jones to provide a record with all necessary information as taught by Roberts in order to locate

the grammar generating data based on individual user to customize the user experience of the system.

Conclusion

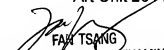
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hemant Patel whose telephone number is 571-272-8620. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hemant Patel
Examiner
Art Unit 2614

HSP



FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600